

PATENT COOPERATION TREATY

EO/US
PCT/JP98/05709

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

United States Patent and Trademark
Office
(Box PCT)
Crystal Plaza 2
Washington, DC 20231
ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing:

01 July 1999 (01.07.99)

International application No.:

PCT/JP98/05709

Applicant's or agent's file reference:

2499WOOP

International filing date:

17 December 1998 (17.12.98)

Priority date:

19 December 1997 (19.12.97)

Applicant:

ISHIKAWA, Tomoyasu et al

1. The designated Office is hereby notified of its election made:



in the demand filed with the International preliminary Examining Authority on:

31 May 1999 (31.05.99)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was



was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer:

J. Zahra

Telephone No.: (41-22) 338.83.38

13T
Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2499WO0P	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP98/05709	International filing date (day/month/year) 17 December 1998 (17.12.1998)	Priority date (day/month/year) 19 December 1997 (19.12.1997)
International Patent Classification (IPC) or national classification and IPC C07F 9/6561		
Applicant TAKEDA CHEMICAL INDUSTRIES, LTD.		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input checked="" type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>

Date of submission of the demand 31 May 1999 (31.05.1999)	Date of completion of this report 13 October 1999 (13.10.1999)
Name and mailing address of the IPEA/JP Japanese Patent Office, 4-3 Kasumigaseki 3-chome Chiyoda-ku, Tokyo 100-8915, Japan Facsimile No.	Authorized officer Telephone No. (81-3) 3581 1101

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No:

PCT/JP98/05709

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the claims:
pages _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the drawings:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP98/05709

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 25-28

because:

☒ the said international application, or the said claims Nos. 25-28
relate to the following subject matter which does not require an international preliminary examination (*specify*):

The subject matter of Claims 25-28 relates to a method for treatment of the human body.

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. _____
are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. _____ are so inadequately supported
by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos. _____

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP98/05709

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	1-24	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-24	NO
Industrial applicability (IA)	Claims	1-24	YES
	Claims		NO

2. Citations and explanations

Based on documents 1-3 cited in the international search report, the inventions in Claims 1-24 of this application do not appear to involve an inventive step.

Document 1: JP, 9-100283, A (Takeda Chemical Industries, Ltd.) April 15, 1997 (15.04.97)

Document 2: JP, 55-11600, A (Fujisawa Pharmaceutical Co., Ltd.) January 26, 1980 (26.01.80)

Document 3: JP, 59-31791, A (Fujisawa Pharmaceutical Co., Ltd.) February 20, 1984 (20.02.84)

Although a phosphono group or a group that can be converted to a phosphono group is not specifically listed as a protective group for the amino group that may be protected in document 1, it is obvious to persons skilled in the art that a phosphono group is included in the protective groups for an amino group that may be protected (see, for example, document 2, Claims 1, 29, and 30; page 14, upper right column, lines 5-14; page 67, lower right column, line 17 to page 68, upper left column, line 4). Moreover, it is known that a compound that is poorly soluble in water may be made quite soluble by the introduction of a phosphono group or a group that can be converted to a phosphono group (see, for example, document 3, page 13, upper left column, line 11 to lower left column, line 3). This review finds that there is no inventive step involved in using a phosphono group or a group that can be converted to a phosphono group as a protective group for the amino group that may be protected in document 1.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP98/05709

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl⁶ C07F9/6561

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl⁶ C07F9/6561

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
CAPLAS (STN), REGISTRY (STN), WPIDS (STN)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP, 9-100287, A (Takeda Chemical Industries, Ltd.), 15 April, 1997 (15. 04. 97), Claims 1 to 13 ; Par. No. [0001] (Family: none)	1-28
Y	JP, 55-11600, A (Fujisawa Pharmaceutical Co., Ltd.), 26 January, 1980 (26. 01. 80), Claims 1, 29, 30 ; page 14, upper left column, lines 5 to 14 ; page 67, lower right column, line 17 to page 68, upper left column, line 4 & EP, 7470, A1 & US, 4268509, A	1-28
Y	JP, 59-31791, A (Fujisawa Pharmaceutical Co., Ltd.), 20 February, 1984 (20. 02. 84), Claims 1, 3 ; page 13, upper right column, line 11 to lower left column, line 3 & EP, 99553, A1 & US, 4563449, A	1-28



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:
 "A" document defining the general state of the art which is not considered to be of particular relevance
 "E" earlier document but published on or after the international filing date
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
 "O" document referring to an oral disclosure, use, exhibition or other means
 "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
 "&" document member of the same patent family

Date of the actual completion of the international search
10 March, 1999 (10. 03. 99)Date of mailing of the international search report
23 March, 1999 (23. 03. 99)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

P C T

国際予備審査報告

(法第12条、法施行規則第56条)
[PCT36条及びPCT規則70]

REC'D 29 OCT 1999

WIPO PCT

出願人又は代理人 の書類記号 2499WOOP	今後の手続きについては、国際予備審査報告の送付通知（様式PCT/ IPEA/416）を参照すること。	
国際出願番号 PCT/J P 98/05709	国際出願日 (日.月.年) 17.12.98	優先日 (日.月.年) 19.12.97
国際特許分類 (IPC) Int. Cl ^o C07F9/6561		
出願人 (氏名又は名称) 武田薬品工業株式会社		

1. 国際予備審査機関が作成したこの国際予備審査報告を法施行規則第57条 (PCT36条) の規定に従い送付する。
2. この国際予備審査報告は、この表紙を含めて全部で 4 ページからなる。 <input type="checkbox"/> この国際予備審査報告には、附属書類、つまり補正されて、この報告の基礎とされた及び/又はこの国際予備審査機関に対してした訂正を含む明細書、請求の範囲及び/又は図面も添付されている。 (PCT規則70.16及びPCT実施細則第607号参照) この附属書類は、全部で ページである。
3. この国際予備審査報告は、次の内容を含む。 I <input checked="" type="checkbox"/> 国際予備審査報告の基礎 II <input type="checkbox"/> 優先権 III <input checked="" type="checkbox"/> 新規性、進歩性又は産業上の利用可能性についての国際予備審査報告の不作成 IV <input type="checkbox"/> 発明の単一性の欠如 V <input checked="" type="checkbox"/> PCT35条(2)に規定する新規性、進歩性又は産業上の利用可能性についての見解、それを裏付けるための文献及び説明 VI <input type="checkbox"/> ある種の引用文献 VII <input type="checkbox"/> 国際出願の不備 VIII <input type="checkbox"/> 国際出願に対する意見

国際予備審査の請求書を受理した日 31.05.99	国際予備審査報告を作成した日 13.10.99	
名称及びあて先 日本国特許庁 (IPEA/J P) 郵便番号100-8915 東京都千代田区霞が関三丁目4番3号	特許庁審査官 (権限のある職員) 唐木 以知良	4 H 8018
電話番号 03-3581-1101 内線 3443		

I. 国際予備審査報告の基礎

1. この国際予備審査報告は下記の出願書類に基づいて作成された。(法第6条(PCT14条)の規定に基づく命令に
 応答するために提出された差し替え用紙は、この報告書において「出願時」とし、本報告書には添付しない。
 PCT規則70.16, 70.17)

☒ 出願時の国際出願書類

- ☐ 明細書 第 _____ ページ、 出願時に提出されたもの
 明細書 第 _____ ページ、 国際予備審査の請求書と共に提出されたもの
 明細書 第 _____ ページ、 _____ 付の書簡と共に提出されたもの
- ☐ 請求の範囲 第 _____ 項、 出願時に提出されたもの
 請求の範囲 第 _____ 項、 PCT19条の規定に基づき補正されたもの
 請求の範囲 第 _____ 項、 国際予備審査の請求書と共に提出されたもの
 請求の範囲 第 _____ 項、 _____ 付の書簡と共に提出されたもの
- ☐ 図面 第 _____ ページ/図、 出願時に提出されたもの
 図面 第 _____ ページ/図、 国際予備審査の請求書と共に提出されたもの
 図面 第 _____ ページ/図、 _____ 付の書簡と共に提出されたもの
- ☐ 明細書の配列表の部分 第 _____ ページ、 出願時に提出されたもの
 明細書の配列表の部分 第 _____ ページ、 国際予備審査の請求書と共に提出されたもの
 明細書の配列表の部分 第 _____ ページ、 _____ 付の書簡と共に提出されたもの

2. 上記の出願書類の言語は、下記に示す場合を除くほか、この国際出願の言語である。

上記の書類は、下記の言語である _____ 語である。

- ☐ 国際調査のために提出されたPCT規則23.1(b)にいう翻訳文の言語
☐ PCT規則48.3(b)にいう国際公開の言語
☐ 国際予備審査のために提出されたPCT規則55.2または55.3にいう翻訳文の言語

3. この国際出願は、ヌクレオチド又はアミノ酸配列を含んでおり、次の配列表に基づき国際予備審査報告を行った。

- ☐ この国際出願に含まれる書面による配列表
☐ この国際出願と共に提出されたフレキシブルディスクによる配列表
☐ 出願後に、この国際予備審査(または調査)機関に提出された書面による配列表
☐ 出願後に、この国際予備審査(または調査)機関に提出されたフレキシブルディスクによる配列表
☐ 出願後に提出した書面による配列表が出願時における国際出願の開示の範囲を超える事項を含まない旨の陳述書の提出があった
☐ 書面による配列表に記載した配列とフレキシブルディスクによる配列表に記録した配列が同一である旨の陳述書の提出があった。

4. 補正により、下記の書類が削除された。

- ☐ 明細書 第 _____ ページ
☐ 請求の範囲 第 _____ 項
☐ 図面 図面の第 _____ ページ/図

5. ☐ この国際予備審査報告は、補充欄に示したように、補正が出願時における開示の範囲を越えてされたものと認められるので、その補正がされなかったものとして作成した。(PCT規則70.2(c) この補正を含む差し替え用紙は上記1.における判断の際に考慮しなければならない、本報告に添付する。)

1. 次に関して、当該請求の範囲に記載されている発明の新規性、進歩性又は産業上の利用可能性につき、次の理由により審査しない。

- ☒ 請求の範囲
 25 - 28

☒ この国際出願又は請求の範囲 25-28 は、国際予備審査をすることを要しない
次の事項を内容としている（具体的に記載すること）。

☐ 明細書、請求の範囲若しくは図面（次に示す部分）又は請求の範囲 _____ の記載が、不明確であるため、見解を示すことができない（具体的に記載すること）。

- ☐ 全部の請求の範囲又は請求の範囲 _____ が、明細書による十分な裏付けを欠くため、見解を示すことができない。

- ☐ 請求の範囲 _____ について、国際調査報告が作成されていない。

2. ヌクレオチド又はアミノ酸の配列表が実施細則の附属書C（塩基配列又はアミノ酸配列を含む明細書等の作成のためのガイドライン）に定める基準を満たしていないので、有効な国際予備審査をすることができない。

- ☐ フレキシブルディスクによる配列表が提出されていない又は所定の基準を満たしていない。

V. 新規性、進歩性又は産業上の利用可能性についての法第12条(PCT35条(2))に定める見解、それを裏付ける文献及び説明

1. 見解

新規性 (N)	請求の範囲	1 - 2 4	有
	請求の範囲		無
進歩性 (I S)	請求の範囲		有
	請求の範囲	1 - 2 4	無
産業上の利用可能性 (I A)	請求の範囲	1 - 2 4	有
	請求の範囲		無

2. 文献及び説明 (PCT規則70.7)

この出願の請求の範囲 1 - 2 4に係る発明は、国際調査報告で引用された文献 1 - 3 からみて、進歩性を有さない。

文献 1. JP, 9-100283, A(武田薬品工業株式会社) 15. 4月. 1997(15. 04. 97)

文献 2. JP, 55-11600, A(藤沢薬品工業株式会社) 26. 1月. 1980(26. 01. 80)

文献 3. JP, 59-31791, A(藤沢薬品工業株式会社) 20. 2月. 1984(20. 02. 84)

即ち、文献 1 には保護されていてもよいアミノ基の保護基として具体的にホスフォノ基またはホスフォノ基に変じうる基は例示されていないが、保護されていてもよいアミノ基の保護基としてはホスフォノ基が含まれることは当業者に明らかである(例えば、文献 2. 請求項 1、29、30、第 14 頁左上欄第 5-14 行、第 67 頁右下欄第 17 行-第 68 頁左上欄第 4 行参照) し、また、ホスフォノ基またはホスフォノ基に変じうる基を導入することにより水に難溶性の化合物をより易溶性とし得ることも知られている(例えば、文献 3. 第 13 頁右上欄第 11 行-左下欄第 3 行参照) ので、文献 1 における保護されていてもよいアミノ基の保護基としてホスフォノ基またはホスフォノ基に変じうる基を用いる点に進歩性は認められない。

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2499WO0P	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP98/05709	International filing date (day/month/year) 17 December 1998 (17.12.1998)	Priority date (day/month/year) 19 December 1997 (19.12.1997)
International Patent Classification (IPC) or national classification and IPC C07F 9/6561		
Applicant TAKEDA CHEMICAL INDUSTRIES, LTD.		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p>
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input checked="" type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>

Date of submission of the demand 31 May 1999 (31.05.1999)	Date of completion of this report 13 October 1999 (13.10.1999)
Name and mailing address of the IPEA/JP Japanese Patent Office, 4-3 Kasumigaseki 3-chome Chiyoda-ku, Tokyo 100-8915, Japan Facsimile No.	Authorized officer Telephone No. (81-3) 3581 1101

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP98/05709

I. Basis of the report

1. With regard to the **elements** of the international application:*

☒ the international application as originally filed

☐ the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

☐ the claims:

pages _____, as originally filed

pages _____, as amended (together with any statement under Article 19

pages _____, filed with the demand

pages _____, filed with the letter of _____

☐ the drawings:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

☐ the sequence listing part of the description:

pages _____, as originally filed

pages _____, filed with the demand

pages _____, filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP98/05709

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 25-28

because:

☒ the said international application, or the said claims Nos. 25-28
relate to the following subject matter which does not require an international preliminary examination (*specify*):

The subject matter of Claims 25-28 relates to a method for treatment of the human body.

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. _____
are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. _____ are so inadequately supported
by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos. _____

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP98/05709

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	1-24	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-24	NO
Industrial applicability (IA)	Claims	1-24	YES
	Claims		NO

2. Citations and explanations

Based on documents 1-3 cited in the international search report, the inventions in Claims 1-24 of this application do not appear to involve an inventive step.

Document 1: JP, 9-100283, A (Takeda Chemical Industries, Ltd.) April 15, 1997 (15.04.97)

Document 2: JP, 55-11600, A (Fujisawa Pharmaceutical Co., Ltd.) January 26, 1980 (26.01.80)

Document 3: JP, 59-31791, A (Fujisawa Pharmaceutical Co., Ltd.) February 20, 1984 (20.02.84)

Although a phosphono group or a group that can be converted to a phosphono group is not specifically listed as a protective group for the amino group that may be protected in document 1, it is obvious to persons skilled in the art that a phosphono group is included in the protective groups for an amino group that may be protected (see, for example, document 2, Claims 1, 29, and 30; page 14, upper right column, lines 5-14; page 67, lower right column, line 17 to page 68, upper left column, line 4). Moreover, it is known that a compound that is poorly soluble in water may be made quite soluble by the introduction of a phosphono group or a group that can be converted to a phosphono group (see, for example, document 3, page 13, upper left column, line 11 to lower left column, line 3). This review finds that there is no inventive step involved in using a phosphono group or a group that can be converted to a phosphono group as a protective group for the amino group that may be protected in document 1.

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PATENT COOPERATION TREATY

PCT/JP98/05709

PCT

NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

TAKAHASHI, Shuichi
Osaka Plant of Takeda Chemical
Industries, Ltd.
17-85, Jusohonmachi 2-chome
Yodogawa-ku
Osaka-shi
Osaka 532-0024
JAPON

Date of mailing (day/month/year) 23 December 1999 (23.12.99)	
Applicant's or agent's file reference 2499WOOP	IMPORTANT NOTIFICATION
International application No. PCT/JP98/05709	International filing date (day/month/year) 17 December 1998 (17.12.98)

1. The following indications appeared on record concerning:

☐ the applicant
 ☐ the inventor
 ☒ the agent
 ☐ the common representative

Name and Address	State of Nationality	State of Residence
	Telephone No.	
	Facsimile No.	
	Teleprinter No.	

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☒ the person
 ☐ the name
 ☐ the address
 ☐ the nationality
 ☐ the residence

Name and Address TAKAHASHI, Shuichi Osaka Plant of Takeda Chemical Industries, Ltd. 17-85, Jusohonmachi 2-chome Yodogawa-ku Osaka-shi Osaka 532-0024 Japan	State of Nationality	State of Residence
	Telephone No. 06 6300 6845	
	Facsimile No. 06 6300 6601	
	Teleprinter No.	

3. Further observations, if necessary:

The person in Box 2 has been appointed as a sub-agent and should be added to the record.

4. A copy of this notification has been sent to:

☒ the receiving Office
 ☐ the designated Offices concerned
☐ the International Searching Authority
 ☒ the elected Offices concerned
☐ the International Preliminary Examining Authority
 ☐ other:

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Masashi HONDA Telephone No.: (41-22) 338.83.38
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